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ABSTRACT

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SOCIAL AND ACADEMIC CHARACTERISTICS OF ELITE HIGH SCHOOL CROSS COUNTRY RUNNERS

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ABSTRACT

The purpose of this study was to determine a typical, non-physiological profile of an elite high school cross country runner. The subjects, 43 male and 43 female who ran at the 1987 Ohio High School Cross Country Championships, responded to a questionnaire which requested information regarding academic achievement, family involvement in running, running experience, and reasons for running. Significant differences were found on a number of variables which classify an elite distance runner. Specifically, academic achievement, sibling involvement in running, perceived effects of running, and motivation for running. The findings support a popular belief that elite distance runners are generally goal-oriented and run for reasons related to personal satisfaction.

INTRODUCTION

High school students participate in athletics for a variety of personal and social reasons. Activity levels for these athletes range from minimal, in bowling and trapshooting, to strenuous, in swimming and cross country running. Those athletes who excel in the strenuous sports are often analyzed as to potential and achievement due to physiological factors (Pollock, 1980, Conley, 1981, Puhl, 1981, Butts, 1982, Lemon, 1982, Burkett, 1985).

Less frequently is a study conducted which attempts to discover potential achievement and characteristics using non-athletic criterion.

The level of activity is so high for cross country running that true potential can not be estimated, in many cases, until after one or two years of initial conditioning. In order to customize an appropriate conditioning program for the potential elite athlete, it would be useful to identify these potential athletes at or near the onset of their conditioning program.

STATEMENT OF THE PROBLEM

The purpose of this study was to discover various "non-athletic" descriptors which are common to elite cross country runners.

REVIEW OF RELATED LITERATURE

The primary focus of literature has been related to adult runners. McCutcheon (1980) discovered that adult runners fall into two distinct categories. Fitness runners, usually female, who are new to the sport and run to control weight or to relax, and competitive runners, usually male with three or more years of running experience.

A sampling of adult runners, Olympic hopefuls, fitness runners, and high school athletes was taken by Carmack (1979), and revealed that many of the runners, regardless of their committment to running, began running

for reasons of physical health (controlweight, avoid injury). Their reasons for continuing their running activities, along with the physical benefits, also included reasons related to psychological health (relaxation, personal satisfaction). In fact, according to Carmack, second behind physical health, are psychological benefits as reasons given for continuing to run.

Olympic runner Jeff Galloway (1984) attempted to categorize the five stages in a runner's life, as he see's them.

Starting as a Beginner, running is a novelty, as new experiences are encountered. The Jogger, phase 2, is one who feels secure in his running and is not goal oriented. He understands the benefits of running but is not obsessed by it. The Competitor plans his running around racing goals. He begins to test himself against other racers and against himself and his personal best times. The Competitor feels a sense of insecurity in his running, as all training is now aimed toward a specific goal. For The Athlete, phase 4, quality of effort is most important. His measure of success is an ability to run close to his potential. Finally, The Runner. For him, running no longer dominates his life, but blends in with all the other factors (family, friends, work). Running becomes part of the daily program, as is sleeping and eating.

All of the literature indicates a tendency for runners, regardless of ability level, to be self-motivated individuals, and for some, driven by personal competition.

STATEMENT OF HYPOTHESIS

It is believed that Cross Country runners display significant characteristics that make them identifiable. Areas such as academic achievement will be above average, involvement in scholarly extra-curricular activities will be noted, and motivational pattern will show a degree of confidence and personal, goal oriented participation.

METHOD

Subjects

The sample for this study came from the population of 560 participants at the Ohio High School Cross Country State Championships, held in Columbus, Ohio on November 8, 1987. The sample (n=86) was comprised of male (n=43) and female (n=43) athlete team members from grades 9-12. Twelve teams were randomly selected (using a table of random numbers) and members of those teams were surveyed.

Instrument

The subjects responded to a 12 item questionnaire, which took about 5 minutes to complete. The questionnaire consisted of 5 parts. Part 1 dealt with demographic information of a general nature. Part 2 dealt with academic achievement and the perceivedinfluence of cross country running on academics. Part 3 specifically requested information about family involvement in running (parents, siblings, family order). Part 4 consisted of additional athletic and non-athletic activities students are involved in at school. Students were permitted an unlimited number of responses on Part 4. The final section, Part 5, listed 12 possible motivational reasons for running cross country. Students were asked to select their two most important reasons for running.

Items related to Parts 1, 2, and 3 were selected based on a review of running literature. Parts 4 and 5 were drawn heavily from the writings of Carmack (1979) and McCutcheon (1980). Although difficult to establish a validity based upon an original, one-time questionnaire, the items gleaned from Carmack are shown to have had a correlation coefficient of at least .78 (mean coefficient =.83) indicating that each item was sensitive to measuring both extremes of the disposition.

RESULTS

Demographics

Descriptive statistics for demographics are reported in Table 1 for the total of 86 subjects. The mean grade in school for the subjects was 10th grade, 8th month, with the mode being 11th grade. Experience of the runners varied from 1 to 5 years, mean experience was 3.08. The most frequent response was having run for more than 4 years, which would include junior high school. Although this does not test as significant, it does indicate a high level of experience for the elite runners. The males tend to be more experienced (mean 3.49) than the females (mean 2.67).

Table 1

Sample	n	Grade M	Grade Sd.	Years Running M	Years Running Sd.
A. Total	86	2.87	1.02	3.08	1.44
B. By Sex					
Males	43	3.09		3.49	
Females	43	2.65		2.67	

Academic Achievement

Elite cross country runners tend to excel in academic activities. Mean grade point average was 3.13 which is significantly above the norm (assuming 2.9 as a population average) $t(80) = 3.16$, $p < .002$.

In addition, response to the question as to the academic effect of cross country running, 42% felt running made them better students, 55% indicated running had no effect. Although not scientifically sound, 97% felt Cross Country running had either positive or no effect on academics. Only 3% indicated a negative effect.

Table 2

Sample	G.P.A.		Influence on G.P.A.		
	n	M.	Sd.	pos.	no effect	neg.
A. Total	81	3.13	.67	42%	55%	3%
B. By Sex						
Males	41	3.00				
Females	40	3.35				

Family Influence

There seems to be no significance to a runner's birth order in the family or if the parents run. However, of the subjects who are the youngest or middle children in the family, 65% indicated that they had an older sibling who ran cross country. So, there apparently is a direct family involvement between siblings on influencing them to participate in cross country.

Extra-Curricular Activities and Sports

As expected, the elite runners tend to be involved in the more academic extra-curricular activities. Although Foreign Language Club had the largest involvement (21%), the high level of participation (19%) in National Honor Society is very significant. National Honor Society members are nominated and voted on by teachers and administrators, based upon academics, leadership, scholarship, school involvement, and attitude.

In addition to cross country, the elite runner is involved in an average of 1.36 additional sports (mode 1.00, Sd. .61). The most frequent choice was track (95%).

Table 3

Involvement in Other Sports

Track	95%
Basketball	23%
Softball	7% (girls only)
Swimming	5%
Other	5%

Motivation

Subjects were asked to identify two reasons for their involvement in cross country, from a list of 12 choices. There were definite significant preferences in the motivation of the subjects. Tendencies leaned heavily toward the general categories of psychological health and goal achievement DF(5) $x^2=54.92$ $p < .001$.

Although the breakdown of choices between sexes was also significant, it was not as dramatic. Girls tended to favor affiliation as one of their choices, and less towards goal achievement (DF(5) $x^2=10.15$ $p < .10$).

No significant difference was found for the various grades in school. All grades 9, 10, 11, and 12 tended to be consistent in their choices (with the lone exception of 9th grade, tangible rewards. Many are motivated by their first varsity letter!).

Specific selections showed a wide range of selections. Top motivators were the personal satisfaction from running and the competetion. The least selected choices were spectator approval at races, and relaxation. As mentioned, this substantiates a belief that elite runners tend to be goal oriented, run for success, and are driven by personal desires and a need to satisy their own interests, regardless of the influences and peer pressure so common in high school.

Other influences (7%) consisted of influence of a coach (6%) and spectator approval at races (1%) as the lowest choice among the elite runners. The top high school athletes participate because of their personal choice to do so, not due to outside influence or pressure.

Table 4

General Categories of Motivation

Psychological Health	60%
Goal Achievement	54%
Affiliation	37%
Tangible Rewards	26%
Physical Health	16%
Other Influences	7%

(Subjects were permitted two choices)

Table 5

Specific Motivational Reasons For Running

Personal satisfaction	58%
Competetion	41%
Friendship of teammates	32%
Earn a college scholarship	23%
General fitness	12%
Train for another sport	10%
Influence of a coach	6%
To be a member of a team	5%
Earn a varsity letter	4%
Control weight	3%
Relaxation	2%
Spectator approval at races	1%

(Subjects were permitted two choices)

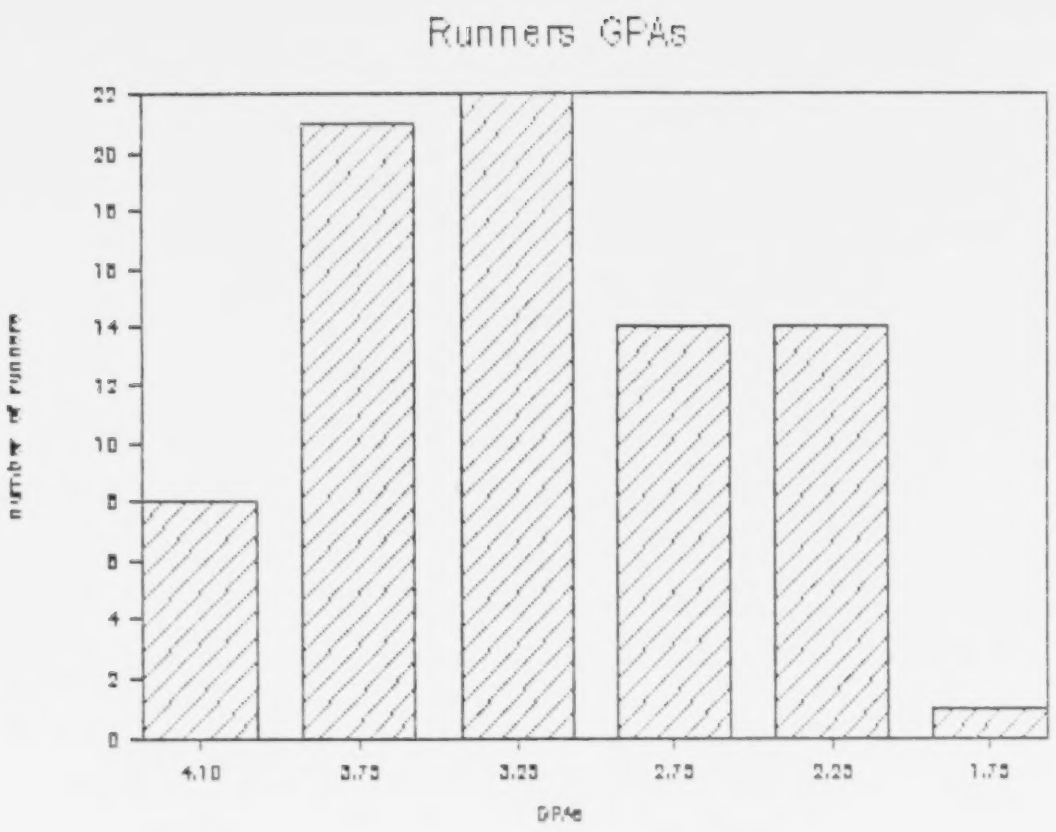
Conclusions

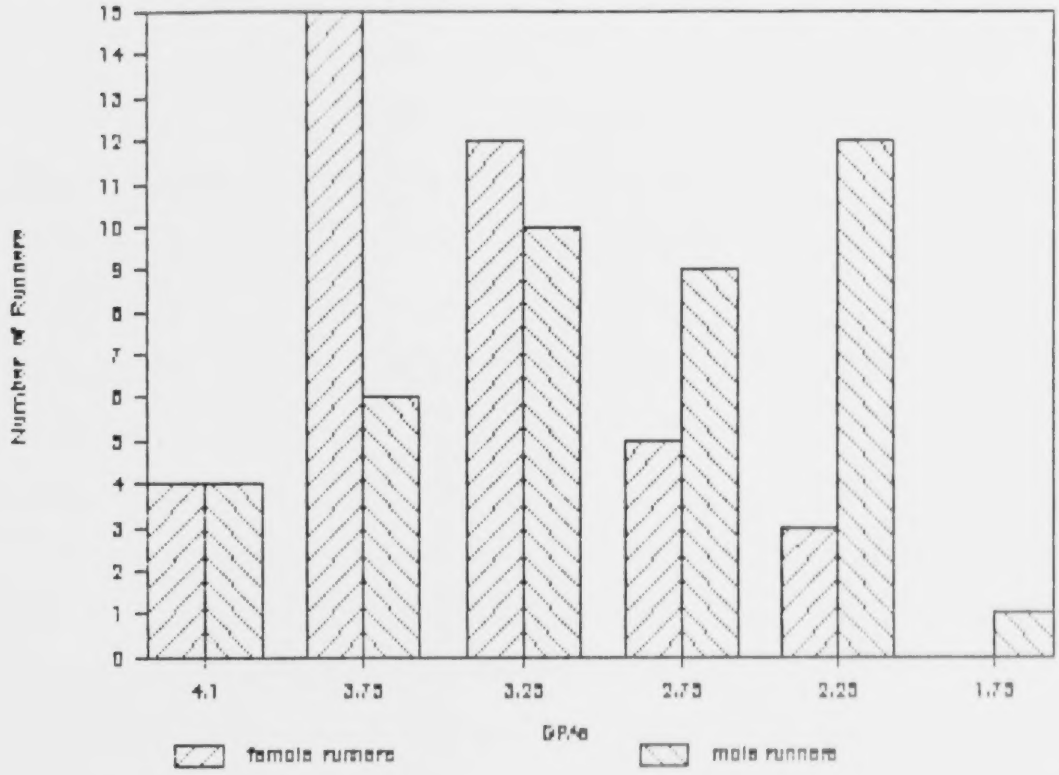
This study is an exploration into the motivational patterns, influences upon, and academic achievement of elite high school distance runners.

Clear differences were found between the scholarship level of runners and the general population. Additionally, the subjects themselves found running to have a positive effect on their academics.

These runners tend to follow a pattern of following in their big brother/sisters footsteps, as a clear majority have had siblings run cross country.

Finally, the motivational patterns of these high school athletes tend to support the belief that they run because of personal desires, are goal oriented (success through competetion), are loyal to their teammates, and are self-motivated when it comes to running.


Runners GPAs
22
20
18
16
14
12
10
8
6
4
2
0
4.10
3.75
3.25
2.75
2.25
1.75
GPAs


Runner GPAs By Sex
Number of Runners
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
4.1
3.75
3.25
2.75
2.25
1.75
GPAs
female runners
male runners

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